



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/657,109	09/09/2003	Myung Hoe Koo	1372.08	9216
29338	7590	12/31/2007		
PARK LAW FIRM 3255 WILSHIRE BLVD SUITE 1110 LOS ANGELES, CA 90010			EXAMINER ALI, SHUMAYA B	
			ART UNIT 3771	PAPER NUMBER
			MAIL DATE 12/31/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/657,109

Applicant(s)

KOO, MYUNG HOE

Examiner

Shumaya B. Ali

Art Unit

3771

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|-------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>9/9/03</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-25 rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. In claim 1 lines 3 and 4 "two nose rings...inserted into the nostril" is non-statutory matter. Applicant may consider using "adapted to" language to claim position of the filter with respect to the body parts.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 4,6,16,17, and 22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 4 line 3 the "about four (4) μ " and "about five (5) μ " and in claim 10 line 2 "'ten (10) μ " is indefinite. Does the unit correspond to meter or centimeter? Exact unit is not clear. Furthermore, what range is defined by "about" is unclear.

In claim 6 line 2 "the filter web protrudes out of the nose ring" is indefinite. It appears applicant is claiming a method step. Structure required to perform said step is not clear.

In claim 16 lines 2 and 3 "rotatably attached" is indefinite. A structure that is required to allow rotatable attachment is not clear.

In claim 17 lines 2 and 3 "end connector can adjust its length between the nose ring and the bridge body" is indefinite. It appears applicant is claiming a method step; however, structure that allows end connector to adjust its length is not clear.

In claim 22 line 2 "flexible material" is indefinite. It appears applicant is refereeing to a specific material composition that allows flexibility, however, that material composition is not clear.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 9-12, 15, 17, 19-21, and 24 are rejected under 35 U.S.C. 102(b) as being anticipated by Amezcua US 4,221,217.

As to claim 1, Amezcua in his specification and drawings discloses a wearable inhalation filter for a user to wear in her or his nostrils, comprising a) two nose rings (22) that are inserted into the nostrils (see figures 2 and 3); b) a bridge (created by 27-30) that connects the nose rings; wherein each of the nose rings comprises a filter assembly (23,24,25) for filtering air being inhaled, and wherein the length of the bridge between the two nose rings is adjustable by sliding bridge members 29 and 28.

As to claim 2, Amezcua discloses the filter assembly comprises a filter web (23 and 24), wherein the filter web comprises a physical filter layer that inherently comprises

a plurality of pores (23 is fibrous filter, thus inherently has pores, see col.4, lines 35 and 36).

As to claim 9, Amezcua discloses the filter web further comprises a chemical filter (layer 24 is charcoal layer, see col.4, lines 36 and 37. Charcoal is inherently a chemical).

As to claim 10, Amezcua discloses the chemical filter layer comprises active carbon (layer 24 is charcoal, see col.4, lines 36 and 37, which is inherently considered activated carbon).

as to claim 11, Amezcua discloses the filter assembly further comprises a filter ring (25), wherein the filter ring holds the filter web (25 prevents layers 23 and 24 from falling out of the nose ring (22), thus acts as a support layer to hold the filter web), wherein the filter ring is detachably attached to the nose ring (25 can be taken out of the nose ring (22) as seen in figure 6, thus ring (25) is detachable from the nose ring (22)).

As to claim 12, Amezcua discloses the filter ring is received in a circular groove (see a groove formed by the passage walls 26 in figure 6) provided on the nose ring.

As to claim 15, Amezcua disclose the bridge has two end connectors (30 and 27) and a bridge body (formed by 29 and 28, see fig.8), and wherein the end connector connects the bridge body to the nose ring (structure 32 on the end connector connects the body to the nose ring as seen in figures 6 and 10).

As to claim 17, Amezcua discloses the end connector can adjust its length between the nose ring and the bridge body (flange like structure 32 has six grooves, thus allows for adjustment of the connector when slide into passage 26 at six different positions).

As to claim 19, Amezcua discloses the length of the bridge body is adjustable (by catching teeth on 28 to a desired groove on 29).

As to claim 20, Amezcua discloses the bridge body comprises a first bar (28) and a second bar (29), wherein the second bar comprises a slide hole (a hole is formed between the walls of 29, see fig.7) into which the first bar can slide (as seen in fig.8).

As to claim 21, Amezcua discloses the first bar comprises a length adjusting projection (see teeth on 28 in fig.7), wherein the slide hole comprises a plurality of length adjusting holes (see grooves formed inside 29), and wherein the length adjusting projection engages with one of the length adjusting holes (as seen in figure 8).

As to claim 24, Amezcua's nose rings (22) have opening at the top (as best seen in fig.10) and at the bottom (as best seen in fig. 6) that allows air in and out of the ring (22), thus these openings act as plurality of breath holes.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over

Amezcua US 4,221,217 in view of Braun et al. US 5,656,368.

As to claim 3, Amezcua lacks a corrugated shape filter web. However, Braun in a breathing apparatus teaches non-woven filter web that are corrugated (see col.26, lines 42-27, and figures 1 and 2). Therefore, it would have been obvious to one of ordinary

skill in the art at the time the invention was made to modify Amezcua in order to provide corrugated filter web because such construction of the web is known in the art as taught by Amezcua. One of ordinary skill in the art would be motivated to provide corrugation on filter web to increase filter volume so the filter can be used for a prolonged period of time.

Claims 4, 5, 16, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Amezcua US 4,221,217.

As to claims 4 and 5, Amezcua lacks the size of the pores is in a range from about four (4) μ to about twenty five (25) μ / about ten (10) μ . However size of the filter is a design consideration which depends on the size of bacteria, virus, or materials being filtered. Therefore, it would have been obvious to one of ordinary skill in the art to choose claimed filter size, for example 10 μ , for the purposes of preventing material that are larger than 10 μ from entering the nasal cavity.

As to claim 16, Amezcua is silent on end connector is rotatably attached to the nose ring. However it would have been obvious to one of ordinary skill in the art rotate arms (30/27) to attach the end connector to the grooves (created between walls 26) of the nose ring by rotating the end connector (30/27).

As to claim 22, Amezcua is silent on the nose ring is made of flexible material. However, Amezcua discloses the ring can be plastic, typically polyethylene (see col.4, lines 26). Therefore, it would have been obvious to one of ordinary skill in the art that some polyethylene can be flexible, thus the nose ring of Amezcua is considered flexible.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Amezcua US 4,221,217 in view of Adlee US 1,071,015.

As to claim 6, Amezcua lacks the filter web protrudes out of the nose ring.

However, Adler teaches that filter web (10) can be positioned so that the web protrudes out of a nose ring (11). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Amezcua in order to provide protruding filter web because it is known in the art as taught by Adlee. One of ordinary skill in the art furthermore would be motivated to have the filter web protruding out of the nose ring for the purposes of providing larger web surface area, thus increasing filter volume so that the filter can be worn for a prolonged period of time.

Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Amezcua US 4,221,217 in view of Adlee US 1,071,015 and further in view of Polberth US 2,572,254.

As to claim 7, Amezcua lacks the filter webs for the two nose rings are integrated into a single filter web. However, Polberth teaches a filter web for the two nose rings (10) are integrated into a single filter web (12). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Amezcua in order to provide a single filter web as claimed because such arrangement is known in the art as taught by Adlee. One of ordinary skill in the art would be motivated to provide a single filter web over the nose rings for the purposes of covering area between the two rings, thus allowing better seal around the periphery of the nostrils for the purposes of preventing air particulates from entering though the periphery of the nostrils.

As to claim 8, Polberth in figure 1 teaches the filter web wraps around the nose rings and the bridge.

Claims 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Amezcua US 4,221,217 in view of Wen US 2003/0111075A1.

As to claim 13, Amezcua lacks one or more mesh layers that are adjacent to the filter web. However, Wen teaches mesh layer in a filter (see fig.4, 52, and page 3, paragraph 30 lines 9-12). Therefore, it would have been obvious to one of ordinary skill in the art to modify Amezcua in order to provide a mesh layer for the purposes of allowing the filter web to have an antibacterial and antiviral agent as taught by Wen (see page 3 paragraph 30 lines 9-12).

As to claim 14, Wen teaches the mesh layers are plated with silver (see page 4, claim 6, line 2).

Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Amezcua US 4,221,217 in view of Fidrych US 4,453,291.

As to claim 18, Amezcua disclose the end connector comprises a plurality of circular teeth (32) along the length of the end connector (as seen in figures 6-10), wherein the nose ring comprises a hole (though passage 26). Amezcua however lacks the hole comprises a circular projection, and wherein the two adjacent circular teeth of the end connector engage with the circular projection of the nose ring. However, Fidrych in a locking device teaches rotatable connection of two locking parts one of which has adjusted circular teeth (fig.1, 48) which rotates into a hole (fig.1, inside 21). The hole has projections (fig.1, 49) to obtain a locking position between the parts (see col.5, lines 50-68 and col.6 lines 1-16). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Amezcua in order to provide a circular projection on the nose ring for the purposes of providing a rotating

groove/surface for the circular teeth in order to form a locking engagement as taught by Fidrych.

Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Amezcua US 4,221,217 in view of Alperovich et al. US 2003/0106556 A1.

As to claim 23, Amezcua lacks the nose ring is made of silicone. However, Alperovich teaches nose ring body (fig.1, 1) is constructed from silicone (see page 2, paragraph 15). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Amezcua in order to provide silicone nose ring for the purposes of providing a reliable accommodation of the filter in the nasal cavity and a reliable sealing of the gap between filter body and inner surface of the nasal cavity as taught by Alperovich (see page 2 paragraph 15 lines 1-3).

Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Amezcua US 4,221,217 in view of Pawelek US 2,151,227.

As to claim 25, Amezcua lacks two holding members that partially surround the nose rings. However Pawelek teaches two holding members (fig1, 10 and 11) that embrace a nose ring (fig.1, 1) (see col.2 lines 24-30). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Amezcua in order to provide holding member for the purposes of embracing the nose ring as taught by Pawelek. One of ordinary skill in art would be motivated to provide supporting structure that partially surrounds the nose ring for the purposes of adding structural support to the nose ring.

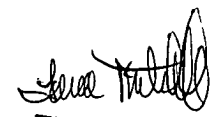
Conclusion


The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Prior art made of record not relied upon cited in the PTO form 892 pertain to nasal filtering device.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shumaya B. Ali whose telephone number is 571-272-6088. The examiner can normally be reached on M-W-F 8:30am-5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Justine Yu can be reached on 571-272-4835. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


TEENA MITCHELL
PRIMARY EXAMINER

 12/23/07
Shumaya B. Ali
Examiner
Art Unit 3771